

CLAIMS

1. An analytical tool with opening in insulating film, the tool comprising a substrate, a flow path for moving a sample along the substrate, a reagent portion provided in the flow path, and an insulating film covering the substrate and including a first opening for defining a region for forming the reagent portion;
wherein the insulating film further includes at least one additional opening positioned downstream from the first opening in a movement direction in which the sample moves.
2. The analytical tool with opening in insulating film according to claim 1, wherein the flow path is configured to move the sample by capillary force.
3. The analytical tool with opening in insulating film according to claim 1, wherein the sample is blood.
- 20 4. The analytical tool with opening in insulating film according to claim 1, further comprising a first and a second electrodes provided at the substrate;
wherein the insulating film covers the first and the second electrodes, with part of the first and the second electrodes exposed.

5. The analytical tool with opening in insulating film according to claim 4, wherein said at least one additional opening is connected to the first opening; and

wherein the insulating film includes a control edge
5 defining a downstream edge of the region for forming the reagent portion in the movement direction.

6. The analytical tool with opening in insulating film according to claim 5, wherein said at least one additional opening is
10 connected to the first opening at a portion of the control edge adjoining in a direction which is perpendicular to the movement direction.

7. The analytical tool with opening in insulating film according
15 to claim 5, wherein the control edge is in a form of a straight line extending in a direction which is perpendicular to the movement direction.

8. The analytical tool with opening in insulating film according
20 to claim 7, wherein the first opening is rectangular; and
wherein a dimension of the control edge in the perpendicular direction is set to 60 to 95 % of a dimension of the first opening in the perpendicular direction.

25 9. The analytical tool with opening in insulating film according to claim 5, wherein the control edge is in a form of a curved line dented toward a downstream side in the movement direction.

10. The analytical tool with opening in insulating film according to claim 5, wherein the insulating film includes an island portion which is in a form of an island and which includes the control edge.

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11. The analytical tool with opening in insulating film according to claim 10, wherein the island portion has a width which decreases as the island portion extends downstream in the movement direction.

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12. The analytical tool with opening in insulating film according to claim 11, wherein the island portion is triangular or semicircular.

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13. The analytical tool with opening in insulating film according to claim 5, wherein the insulating film includes a peninsula portion which is in a form of peninsula and which includes the control edge.

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14. The analytical tool with opening in insulating film according to claim 13, wherein said at least one additional opening includes a pair of additional openings arranged to adjoin the peninsula portion in a width direction.

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15. The analytical tool with opening in insulating film according to claim 14, wherein each of the paired openings has a constant width.

16. The analytical tool with opening in insulating film according to claim 14, wherein each of the paired openings includes a narrow portion positioned relatively upstream in the movement direction and a wide portion positioned downstream from the
5 narrow portion.

17. The analytical tool with opening in insulating film according to claim 1, wherein at least part of said at least one additional opening is offset relative to the first opening in a direction
10 which is perpendicular to the movement direction.

18. The analytical tool with opening in insulating film according to claim 1, wherein the flow path is formed by stacking a cover to the substrate via a spacer;
15 wherein the spacer includes a pair of surfaces defining a dimension of the flow path in a direction which is perpendicular to the movement direction and facing each other while being spaced from each other in the perpendicular direction; and
wherein the spacing between the paired facing surfaces
20 is larger than a dimension of the first opening in the perpendicular direction.

19. The analytical tool with opening in insulating film according to claim 18, wherein the flow path is configured to move the
25 sample by capillary force.

20. The analytical tool with opening in insulating film according to claim 19, wherein the cover includes a discharge port for discharging gas from within the flow path; and
wherein a downstream end of the first opening in the movement
5 direction is positioned upstream from an upstream end of the discharge port in the movement direction.